GN 447
.T9 M2

GN 447
.T9 M2
Copy 1

April 8.

(From the American Anthropologist (N. S.), Vol. 2, October–December, 1900)

TRAPS OF THE AMERINDS—A STUDY IN PSYCHOLOGY AND INVENTION

By OTIS T. MASON

That unicorns may be betrayed with trees,
And bears with glasses, elephants with holes,
Lions with toils and men with flatteries, . . .
Let me work;
For I can give his humor the true bent,
And I will bring him to the Capitol.

Julius Cæsar, II, 1.

MEANING OF THE TERM AMERIND

America, in this connection, embraces all of the Western Hemisphere visited by the native tribes in their activities associated with the animal kingdom. It might be allowed to exclude a small number of frozen or elevated or desert regions untrodden by human feet, were it not for the fact that most of these were the favorite resorts of zoömorphic gods and all creatures of the aboriginal imagination. Most certainly the name America must in this study include those oceanic meadows or feeding grounds, stretching out from the continents often more than a hundred miles, whereon were born and nourished innumerable creatures, vertebrate and invertebrate, which dominated the activities of the littoral tribes, penetrating far inland, and carrying back in the shape of live animals, including fish, birds, and mammals, the by-products of terrestrial activities.

Amerind, or Amerindian, is merely an abbreviation of the phrase "American Indian", which has fastened itself on our literature despite the errors which it involves.

DEFINITION OF THE TERM TRAP

A trap is an invention for the purpose of inducing animals to commit incarceration, self-arrest, or suicide. In the simplest

LIBRARY OF CONGRESS
137344
MAR 8 1901
SMITHSONIAN DEPOSIT

GN 447
.T9 M2

traps the automatism is solely on the part of the animal, but in the highest forms automatic action of the most delicate sort is seen in the traps themselves, involving the harnessing of some natural force, current, weight, spring, and so on, to do man's work.

The climax of invention in any direction is automatic action. The human hand comes first as efficient in human work, and its own movements are supplemented and intensified by devices, but gradually it withdraws itself, its activities being at last performed by apparatus which function in its absence.

These assertions hold true in the devices for capturing animals, which in their simplest forms are merely taking them with the hand just as in gathering fruits. By a second step they are harvested with devices — scoop-nets, dippers, seines, hooks that are substitutes for the crooked finger, reatas, dulls, bolas, and many more. A third step leads to active slaughter with clubs for bruising, knives and axes for cutting and hacking, and with a thousand and one implements for piercing and retrieving. In these the hunters are present and active, making war on the animal.

In the matter of automatism there is no great gulf between the trapper and the hunter. At both ends and in the middle of the trap's activity the man may be present, but not to the victim. Not waiting for the victim to go to its doom of its own will, the hunter, having set his trap, proceeds to entice and compel the game; he has learned to imitate to perfection the noises of birds and beasts—it may be of those he is hunting, of others hunted by them or their enemies;—he knows the smells that are agreeable and the dainty foods most liked; on the contrary he also knows how to allay suspicions in one direction, to arouse them in another,—always with the trap in his mind.

The action of the trap itself is also frequently assisted by the hunter out of sight. He releases the pent-up force of gravity, of elasticity.

Finally, the result of the trap's action is to hand the victim

LC Control Number
tmp96 026228

over to the hunter to carry away or to kill. Often the trap does the killing outright, and the result is raw material for the elaborative industries; but in other cases the hunter must be near by to give the *coup de grâce:* the instances are many where the victim must be dispatched at once, or the trap will be destroyed and the result lost.

THE TRAP AS AN INVENTION

As intimated, the trap teaches the whole lesson of invention: At first it is something that the animal unwittingly treads on (Middle Low German, *treppen*, to tread; tramp is a kindred word) in its tramps and walks or falls into durance; at last it is a combination of movement and obstruction, of release and execution, which vies in delicacy with the most destructive weapons. Gravity and elasticity are harnessed by ingenious mechanical combinations. It is possible to trace the new and useful additions in each class, which in the Patent Office would be called inventions. To follow these in savagery and barbarism, before there were monopolies and patents, is an interesting contribution to the history of empiricism.

THE TERM PSYCHOLOGY

In this paper the term psychology stands for all those mental processes that are caused and developed by trapping. There is the mental activity of the animal and that of the man; the trap itself is an invention in which are embodied most careful studies in animal mentation and habits — the hunter must know for each species its food, its likes and dislikes, its weaknesses and foibles. A trap in this connection is an ambuscade, a deceit, a temptation, an irresistible allurement; it is strategy. Inasmuch as each species has its own idiosyncrasies, and as the number of species was unlimited, the pedagogic influence of this class of inventions must have been exalting to a high degree for the primitive tribes.

The variety of execution to be done by the trap, irrespective of the species of animals, was very great. It had to inclose or

impound or encage, or to seize by the head, horns, limbs, gills; to maim, wound, crush, slash, brain, impale, poison, and so on, as though it had reason — that is, the thought of the hunter had to be locked up in its parts ready to spring into efficiency at a touch. As population increased, wants became more varied and animals made themselves more scarce. They also became more intellectual and wary. If any reader of this may himself have been a trapper he will remember the scrupulous care with which he proceeded at every point — to make the parts stable or unstable, to choose out of innumerable places one that to a careful weighing of a thousand indications seemed best, to set the trap in the fittest manner, and at last to cover his tracks so that the most wary creature would not have the slightest suspicion.

The Amerind knew that the beaver makes for deep water when caught, so he fastened to the trap a heavy stone which held the creature under until it was drowned; he knew also that the beaver would amputate its own leg when it found itself seized, so he must provide for that. The beaver's objection to the smell of anything human is also strong, so the most aromatic substances have to be mixed with castor to sink the weaker into the stronger scent. The savages making a coöperative onslaught upon a village of beaver anticipated their plunging into the stream by rows of stakes driven close together, and killed the beaver while trying to make their escape. To catch a fox it was necessary to win its confidence, and this the savage knew; so he prepared a trap that was perfectly harmless, and let Reynard walk about over the ashes or fresh earth or chaff, picking up dainty bits, until all suspicion was removed. Then was the time to conceal the trap; but all vestiges of human hand or foot must be removed, and the apparatus must be cleaned and smoked most effectually.

PARTS OF TRAPS

The trap, like all other inventions, has classes of parts, namely, the working part, and the mechanical, manual, animal part. The

victim finds itself in a pound, deadfall, cage, hole, box, toil, noose, or jaw, on a hook, gorge, pale, or knife, and so on. This dangerous element, to repeat, may not need any accessories. The fish swims into a fyke, the animal walks into a pit or pound, the bird or climbing animal finds itself in a cage with racheted entrance to prevent egress; that is all.

In a higher stage of invention, where the forces of gravity and elasticity are invoked to do the incarceration, arrest, or execution, there has to be found between the lure and the execution a host of devices, and these form an ascending series of complexities. The simplest of these intermediary inventions is an unstable prop or support of some kind; the slightest pull at a bait removes the ticklish thing, and weight or noose or other deadly part is set free. The trigger and the catch are more complicated and varied; the secret of them all, however, is that an unstable catch is released by the animal in passing, in prying curiosity, or in rubbing; this is connected by means of sticks and strings to the last release, since the operation of releasing is in connection with the device in which the force is confined and by which the work is to be done. In the highest forms of weight-traps and spring-traps there are veritable machines, since they change the direction and the effect of motion. It is on these that most ingenuity has been expended, and in them is exhibited that wonderful threefold play of working force, work to be done, and processes of reaching the end. Variations in the materials utilized will play no mean part also in a continent covering all zones save the antarctic, all elevations at which man can live, and all varieties of vegetal phenomena growing out of temperature and rainfall. To proceed with some order it will be necessary to divide the Western Hemisphere into convenient culture-areas; the following will serve for a provisional list:

Amerind Culture-areas

Areas	*Peoples*
1 Arctic	Eskimo
2 Canadian	Athapascan
3 Atlantic slope	Algonquian-Iroquois
4 Mississippi valley	Siouan
5 Louisiana or Gulf	Muskhogean
6 Southeastern Alaska	Haida-Koluschan
7 Columbian region	Salish-Chinookan
8 Interior basin	Shoshonean
9 California region	Very mixed stocks
10 Pueblo region	Tanoan-Tewan and Sonoran
11 Middle American	Nahua-Mayan
12 Cordilleran region	Chibcha-Kechuan
13 Antillean region	Arawak-Caribbean
14 Upper Amazonian region	Jivaro, Peba, Puno, etc.
15 Eastern Brazilian region	Tupi-Guarani, Tapuya
16 Mato Grosso and southward	Mixed people of Brazilian and Andean types
17 Argentina-Patagonian region	Chaco, Pampean, and Patagonian stocks
18 Fuegian region	Aliculuf, Ona, and Yahgan

The inquiry will not be raised here whether the traps not made of metal and found in the hands of the American savages are entirely aboriginal or whether there has been acculturation. A good knowledge of the traps as they exist or existed will go far toward settling the question of origin.

CLASSIFICATION OF TRAPS

Traps are variously classified according to the concept in the student's mind. If it be the natural element in which they work, there will be—

Land traps for mammals, birds, reptiles, and invertebrates,

Water traps for mammals, birds, reptiles, fishes, and invertebrates,

Air traps for birds and insects.

With reference to their parts, either mechanical or efficient, there are a multitude of names which will appear in a separate

vocabulary. In the setting they are man-set, self-set, ever-set, and victim-set.

For the purposes of this paper traps may be divided into three groups, namely, (A) inclosing, (B) arresting, (C) killing. In each of these we may begin with the simpler forms—those with the least mechanism—and end with those that are more intricate.

A. INCLOSING TRAPS

(*a*) Pen—dam, pound, fyke.
(*b*) Cage—coop, pocket, cone, fish-trap.
(*c*) Pit—pitfalls.
(*d*) Door—with trigger, fall-cage or fall-door.

B. ARRESTING TRAPS

(*e*) Mesh—gill, toils, ratchet.
(*f*) Set-hook—set-line, gorge, trawl.
(*g*) Noose—snare, springe, fall-snare, trawl-snare.
(*h*) Clutch—bird-lime, mechanical jaws.

C. KILLING TRAPS

(*i*) Weight—fall, deadfall.
(*k*) Point—impaling, stomach, missile.
(*l*) Edge—wolf-knife, braining-knife.

A. Inclosing Traps

Inclosing traps are those which imprison the victim, most of them without doing any further bodily harm, though there may be added to these some other devices which will injure or kill. There are four kinds of inclosing traps: (*a*) pen-traps, (*b*) cage-traps, (*c*) pit-traps, (*d*) door-traps.

(a) *Pen-traps.*—These include pounds or corrals on land, and dams, fish-pens, and fykes in the water, the idea being simply to inclose. Traps of this sort have no tops and therefore are not useful for birds. In connection with other forms, small inclosures of this kind are used to surround the bait and to guide the victim in a certain direction. The pen or pound is like a farmyard—it is an inclosure in which animals are shut. How the animal gets in, how it is kept in, and what is done to it afterward will

decide whether the pound is a trap or a corral, or whether it is a reservoir, an abattoir, or a domesticating device. The simplest form of pound is of brush or reeds and confines whatever enters, large or small; but the perfected form, in whatever element it is erected, has interstices carefully adapted to retain certain species and to allow others to escape, or holds the adult individual in and lets the small and young out. The savage tribes understood this process well and, further, could make movable walls of reeds and long nets; indeed, the great impounding nets are the last word in the series. There is a vast deal of natural history and learning in them: they are on land or in the water; above water-level or submerged; in still water or in running water; facing the current or with the current; mouth upward or mouth downward; man-closed, self-closed, or victim-closed,—all the result of good intellectual exercise. Add to the pound an entrance, and there begins another set of inventions around the notion of shutting. A gateway or an entrance may be closed by nature or by device: the tide falls and leaves aquatic creatures imprisoned; animals get under some obstacle and cannot surmount it — they corral themselves. A gateway may be guarded by sentinels also; but gates may be intentionally shut, or a pound-shaped barrier be set up so that the return of those which pass in is impossible. Most pounds, whether in water or on land, have some natural or artificial lane for conducting the game to the gateway. On either side may be precipices, trees with ropes or wattles between wing-nets, or something of the kind along which animals pursue their natural course and are lured or driven to the pen.

(b) *Cage-traps.*—In this class must be grouped all forms of coops and strong house-traps on land, and a great variety of cones, pockets, and fish-traps in the waters: all of these are designed for climbing, flying, or swimming creatures. The cage- or coop-trap, completely inclosed on every side, is a step in advance of an open pen, whether on land or in the water. The

majority of cage-traps have funnel-shaped entrances, into which the animal passes easily and unrestrained, but exit is prevented by means of a pointed strip of wood or other substance acting as a rachet; or, in the case of nets, the small end of the funnel consists of a series of string gates, which the animal passes, and these close the mouth of the net so as to prevent escape.

Among the Eskimo a unique contrivance for catching foxes was a net which was made to be set around a burrow. Stakes were driven into the snow to support the net, which was about five feet high; in the corners were long pockets, opening wide into the net but gradually contracting until the fox could go no farther; endeavoring to turn back, it became hopelessly entangled and died of fright and cold.

(c) *Pits.*—The digging of pits was not common in America before the discovery, owing to the lack of metallic excavating tools. Pits partially dug out and partially built up were seen here and there as a blind for the hunter, who concealed himself therein. Boas, quoting Lyon, describes an Eskimo fox-trap in the snow into which the animal jumped and was unable to extricate itself; it was like a small lime-kiln in form, having a hole near the top in which the bait was placed; the foxes were obliged to advance over a piece of whalebone which bent beneath their weight and let them into the prison.

The central Eskimo, according to the same authority, dig a wolf-trap in the snow and cover it with a slab of snow on which the bait is laid; the wolf breaks through the roof, and as the bottom of the pit is too narrow to afford him jumping room, he is caught.

The Cree in the Saskatchewan country place at the end of their deer-drives a log of wood, and on the inner side make an excavation sufficiently deep to prevent the animal from leaping back.

Pitfalls are said to have been used by the Indians of Massachusetts. They are described as oval in shape, three rods long and fifteen feet deep.

The Concow Indians of California are said to catch grasshoppers for food by driving them into pits. The Achomawi, or Pit River Indians, dug deer pitfalls, ten or twelve feet deep, by means of sticks, and carried the earth away in baskets. In southern Brazil, also, wild beasts were caught in pits dug for that purpose and covered with leaves.

(d) *Door-traps.*—The last form of inclosing trap to be mentioned here is also the most mechanical; it includes those in which a gate or door falls and incloses the whole of the animal, or in which a cage, one side of which is held up by an unstable prop, falls and incloses the victim.

Among inventions of capture in which the operator is present, the inclosing trap resembles the inclosing net or seine.

Parry describes a small house-trap, made of ice and used by the Eskimo for foxes, at one end of which was a door made of the same material to slide up and down in a groove. This door was sustained by a line which passed over the roof and was caught inside on a hook of ice by means of a loose grommet to which the bait was fastened. The fox, pulling at the bait, released the door of ice and found itself in prison.

Crantz describes a house-trap, used by the Greenlanders, in which a broad stone forms the movable door. I have seen a trap of similar mechanism, used by folk in eastern United States, in which a cage or basket is propped up with a loop of splint; this, pulled inside by the animal tugging at the bait, brings down the cage upon the victim. Doubtless this form of imprisoning animals designed to be taken alive was quite well spread over the continent.

B. Arresting Traps

The arresting traps are designed to seize the victim by the neck or gills or feet, resulting in death but not killing it outright.

(e) *Mesh nets.*—The mesh net is based on the fact that birds, beasts, and fishes, by the conformation of their bodies or by the set of the hair, feathers, or gills, may ratchet themselves; that is,

they can move in one direction into the net, but cannot withdraw themselves. To this class belong "toils" for land animals, trammels and gill nets for aquatic animals.

Among the archeologic treasures of our National Museum are many net-sinkers, which would lead us to the conclusion that netting is an old art among the aborigines. The great majority of meshing devices are for aquatic animals, but tribes on the coast of British Columbia suspend long nets between long poles in order to capture migratory geese and ducks. The Eskimo make nets of sinew, of rawhide, and of baleen; these nets are set across the rivers in the open water, but more ingeniously under the ice by means of holes cut at such distances apart as to enable the fishermen to draw the net out and in by means of a very primitive tackle. In order to set the net, the line is put over the end of the pole and thrust under the ice and in the direction of the other hole, from which another pole with a hook on the end is run. The upper edge of the net has floats and the lower end sinkers.

A device somewhat in the nature of this is doubtless used by the Eskimo of Point Barrow for catching seals: four holes are drilled through the ice about a breathing-hole; from these a net is set under the breathing-hole, the lines being worked through the four corners of the space; the net is hung under the ice, and the seal coming to breathe is entangled therein.

Gill nets are set for seal after the ice forms along the shore. Murdoch reports that smaller seals are captured also in meshing nets of rawhide set along the shore in shallow water; he refers to many authorities on the same subject, but thinks that the meshing nets in northern Alaska came from Siberia.

The use of gill nets is universal throughout Alaska, whether it was an aboriginal invention or not. Elliott illustrates Eskimo women catching salmon in a gill net consisting of a pole and a triangular net attached. The pole rests on a stone at the water-line, while the net sinks in the water; as soon as a fish strikes, the women lift the pole, extricate the fish, and reset the net.

Mesh-fishing is also quite common among the Athapascan tribes, both on the Yukon and on the Mackenzie. Charlevoix states that in St Francis river, Canada, the Indians made holes in the ice through which they let nets five or six fathoms long; he also describes the taking of beaver by means of nets.

(f) *Set-hooks.*— These may be employed on land or in the water for taking mammals, birds, or fishes. A toggle or gorge may be so baited or placed that a duck or a goose, by diving and swallowing it, may be held under the water and drowned. A single hook may be set for vermin, or baited and left in the water, especially for large fish; for the smaller fish, the trawl or trot-line holding several hooks may be stretched across a body of water, and thus the game may be secured in the absence of the fisherman.

In one sense, most hooks used in taking birds and fishes are traps. They are baited and cast into the water or placed in such position on land that the hunter is out of sight. A line is attached to hooks of this kind, one end of which may be held in the hands of the hunter or tied to a buoy or other signal device.

Anything like a comprehensive treatment of this capture invention would far exceed the limits of this paper; but it is interesting to note that fish-hooks are not found in many American areas — large regions are entirely devoid of them, and even in ancient mounds and works all such relics are wanting. No picture of a fish-hook is seen in any Mexican or Maya codex, and Von den Steinen notes the entire absence of fish-hooks from large places on the affluents of the Amazon. The simplest form of this class of devices was seen by Lumholtz among the Tarahumari in northern Mexico; they catch blackbirds by tying corn on a snare of pita fiber hidden under the ground; the bird swallows the kernel, which becomes toggled in its esophagus, and cannot eject it.

Another simple form of hook used in catching fishes, reptiles, and birds is a spindle-shaped toggle with a string attached to the middle; the animal swallows the gorge, as it is called, and is thus securely caught.

In the order of complexity — a removal from the mere action of hand-hooks for capture — hook-traps may be divided into the following classes:

The seed on a string.
The gorge.
Hook at the end of string; squid hook.
Baited hooks.
Compound hooks.
Barbed hooks.
Automatic hooks.

(g) *Noose.*—This is a most interesting class of traps. A string or thong or rope, or a bit of whalebone and sinew, may have one end looped around itself so as to slip with perfect ease; the other end will be fastened to some object. This noose may be so placed that the animal will run its head or its foot into it and be caught; or it may be attached to a bent sapling or some form of springe which is held down by a device, to be liberated by the animal coming to seize the bait or lure. In order to prevent the animal from gnawing the snare, perforated sticks may be suspended just over the knot, thus making a very complicated device. The noose may be used in the air for birds on the wing, on the land in many ways, and sparingly in the water.

Boas says that among the central Eskimo water-fowl of all descriptions are caught in abundance in whalebone nooses fastened to a long whalebone line or to a thong. The line is set along the edge of a lake, particularly near the nesting-places. At shallow points these lines are placed across the water to catch the diving and swimming birds. Hares, ermines, and lemmings are also taken in whalebone snares. E. W. Nelson describes a noose for catching Parry's marmot, which involves a form of release mentioned also as used among the Iroquois. The victim enters the leadway as usual, and instead of pulling at the bait to release the spring, it gnaws in two a string which holds the snare down and

which has something on it appetizing to the animal. In the Iroquois rabbit-trap the string is steeped in salt.

The simplest nooses at Point Barrow are made of baleen and set around where fine gravel has been placed to attract the birds. Accounts are also given of nooses of whalebone set in water along the shores where ducks dive for their favorite plants, and which catch the birds by the neck. This reminds one of the use of the mesh net for the same purpose in California. From Nelson and other observers among the Eskimo, and from the examination of collections in the museums, it is learned that the methods and places of setting a noose are limited only by the habits of the different animals.

In the Mackenzie river country, and wherever the Hudson Bay Company's people have prosecuted their work, the snare and the springe are very commonly employed. Even reindeer and moose are strangled by means of snares set in their way.

Father Morice figures a great variety of applications of the noose. In a form called the hedge-snare an open gateway in the hedge is flanked by two stout posts, each of which has a notch near the top; the noose is placed open so as to fill the space between the posts; above the noose is fastened a stick just fitting across the gateway, the ends resting in the notches of the posts. The animal runs its head into the noose, releases the toggle, and the spring flies up. The insertion of the long stick or pole into the lines above the noose is very common in the northern Athapascan area.

In Wood's *New England Canaan*, we have the quaintest description of a New England trap:

> The Salvages take these in trappes made of their naturall Hempe which they place in the earthe where they fell a tree for browse and when hee roundes the tree for the browse if hee tread on the trap he is horsed up by the legg by means of a pole that starts up and catcheth him.[1]

[1] *New England Prospect*, Prince Society; Boston, 1883, p. 202.

The Gentleman of Elvas[1] gives the following description of the trap among the Autiamgue tribes:

> With great springes which lifted up their feet from the ground; and the snare was made with a strong string, whereunto was fastened a knot of a cane, which ran close about the neck of the conie, because they should not gnaw the string.

Teit, in his account of the Thompson River tribe,[2] describes deer fences and springs used in catching large and small animals. Mrs Allison describes snares for catching deer and birds in the same region. This custom prevailed also in California among many tribes described by Frost and Powers. Zuñi boys catch blackbirds with snares made of horsehair fastened to rope; these snares are laid on the ground and seeds placed between; when the birds alight they put their feet into the snare and are drawn up and captured. The older Zuñis drive sunflower stalks into the ground and fasten a noose on the top; when a hawk, watching for field-mice, alights on the stalks, its feet are ensnared; being unable to rise, the hawk remains stupidly on its perch and allows itself to be captured.

The Tarahumari of Chihuahua are very ingenious in trapping rats, gophers, and deer. The ancient inhabitants of Copan caught quetzal birds in snares, and having plucked their beautiful feathers, set them at liberty again. In southern Brazil birds were snared by the feet, by the neck, and by the body. The Fuegians also use baleen nooses, which are set hidden in the grass for the purpose of catching partridges and other birds.

(h) *Clutching devices* are best exemplified by bird-lime, of which last there is not a specimen in the National Museum. The ordinary jaw trap of the hunters may be placed in this class; the common steel rat trap is a good example. It is possible that spring nets may have been used in certain parts of America before

[1] Hakluyt, *Voyages*, vol. III, p. 114.

[2] *Memoirs* of the American Museum of Natural History, Anthropology, vol. II, pp. 247–249, figs. 228, 229.

the discovery, but the principle involved in the metallic clutching traps was not known.

C. Killing Traps

The principles involved in killing traps are those mentioned under "hunting," as crushing, piercing, and cutting, giving a blow, a stab, or a slash.

(i) *Weight-trap.*—The simplest form of killing trap is the fall, or deadfall, in which a heavy weight drops suddenly upon the animal, destroying its life. The most interesting part of the deadfall, however, is not the crushing of the animal, which is a very gross and brutal operation, but the inventions for securing an unstable support of the weight and for releasing this support by means of the trigger or bait contrivance. There are few separate supplementary or accessory appliances to the deadfall, since the animal is slain outright.

The fall-trap was found in several of the areas mentioned. Essentially, in its least complex form, it consists of five parts: a heavy weight to crush the animal, a fixed support (perhaps a stake in the ground), an unstable support on which the weight rests, a catch which prevents the weight from falling until the bait is nibbled or the string pulled, and, lastly, the trigger itself. The whole weight then comes tumbling upon the animal. The central Eskimo form of deadfall has a slab of ice as a crushing weight, and the same sort of device is found among the western Eskimo. FitzWilliam[1] describes minutely a simple form of deadfall. The Hudson Bay Company's native trappers have a great variety of this particular type. Strachan Jones says the Kutchin caught foxes, wolves, and wolverines in the deadfall.

Maximilian figures a deadfall used for bears in Pennsylvania: the animal walks between two logs; above are two logs fastened firmly together; these are held up by a crossbar supported between two sticks; a lever attached to the logs passes over the

[1] *The Northwest Passage by Land.*

crossbar and is held down at either end in a ratchet, where there is a bait. The bear crouches between the logs, pulls the trigger, and releases the lever, which flies up and lets the ring that supports the fall slip off; then comes the tragedy.

Similar traps are noted in British Columbia and throughout the southwestern country, but I have no reference to a fall-trap in middle America or in South America. I am told by Dr Hough that the Hopi of Arizona have two very primitive forms of deadfall: one, for foxes, consists of a heavy stone slab worked between two upright slabs for wings; one end of the prop rests above against the stone, the other end rests on a cobblestone beneath; the least touch of the prop rocks the cobblestone and lets the weight down upon the fox. In this case the proverb of the rolling stone is reversed. In another form, used for taking birds, the box and the fall or stone slab are similar. The release consists of the following parts: first, the upright and the notched catch, precisely as in the figure-4 traps; to the bottom of the notched catch a short string is tied, having at the other end a small wooden toggle which is held by a little rod resting against it and caught at its other extremity in the grains of the sandstone slab. This is, indeed, a ticklish support, and the least touch overcomes the friction between the trigger and the slab; this sets free the toggle, which unwinds from the post, the hook-catch flies up, and the weight falls.

(k) *Point-traps* of the highest order were not common in America; that is, the use of arbalist or bow for the purpose of driving an arrow or bolt into the victim or for impaling, or the use of sharpened sticks in the pathway of land animals; but the throwing in the way of carnivorous animals of sharpened whalebone splinters wrapped in fat was practiced.

Bancroft mentions a bear trap, used by the Aleuts, consisting of a board two feet square and two inches thick, furnished with barbed spikes, which was placed in Bruin's path and covered with dust. The unsuspecting victim stepped upon the smooth surface,

when his foot sank and was pierced by one of the barbed hooks. Maddened with pain, he put forth another foot to assist in pulling the first away, when that, too, was caught. When all four of the feet were spiked to the board, the beast fell over on its back and its career was soon ended by the hunter.

The wolf-bait, made of a piece of whalebone sharpened at both ends and doubled up, has been mentioned by Boas, and examples of the same device were brought to the National Museum by Nelson from St Michael, Alaska.

Lumholtz says that the Tarahumari catch deer by putting sharpened sticks in the track and stampeding the animals with dogs.

(l) *Edge-traps.*—There were in America two forms of knife or cutting traps of the most ingenious character. One may be called the wolf-knife. A sharpened blade was inclosed in a frozen mass of fat, and stuck up in a block of ice; the wolf, licking the fat, cut its tongue; the taste of the blood infuriated the animal, so that by licking the knife more it caused a larger flow of blood. All the other members of the pack were attracted to the same spot, devouring one another for the sake of the blood, till all were destroyed.

Another form of edge-trap is found in Alaska, where the blades are attached to one end of a lever, the other end of which is inclosed in a torsion spring of rawhide. The animal stops to pick the bait, pulls the trigger, and releases the unstable hook-catch; the knives fly over and the victim is brained.

DISTRIBUTION OF TRAPS IN AMERICA

To trace minutely each of the twelve types of traps throughout the eighteen culture areas of the Western Hemisphere would transcend the limits of this paper. Some of the types were confined to narrow limits, others were used quite universally.

The occurrence or non-occurrence was first of all owing to the presence or the absence of certain animal forms; again, it

depended on material for making traps. Deadfalls, for example, could not be employed where there were no trees or stones, but pitfalls might replace them.

Much must be attributed to the ingenuity of one tribe or another, to their contacts and suggestions, and to the demands made on them. A rigorous climate was more stimulating than one that was enervating. The demands of trade, first native and then European, provoked the inventive faculty immensely in such areas, for instance, as the Hudson Bay territory.

So the study of the distribution of traps is also a study of Amerindian intellect and of the primitive mind in its earliest struggles with problems in mechanics and engineering.

LIBRARY OF CONGRESS
0 019 953 790 8

GN 447
.T9 M2

LIBRARY OF CONGRESS
0 019 953 790 8